

What is claimed is:

1. A stabilized DC power supply device comprising:
an output transistor for converting an input voltage to an output voltage and feeding out the output voltage;
a control circuit for controlling the output transistor so as to maintain a value of the output voltage constant;
a current detection circuit for detecting an output current of the output transistor;
a voltage detection circuit for detecting a voltage appearing between an input side and an output side of the output transistor;
a multiplying circuit for multiplying an output of the current detection circuit and an output of the voltage detection circuit together; and
a protection circuit for restricting a wattage power of the output transistor according to an output of the multiplying circuit.
2. A stabilized DC power supply device as claimed in claim 1,
wherein, at least the control circuit is incorporated into a semiconductor integrated circuit and the output transistor is connected externally with respect to the semiconductor integrated circuit.
3. A stabilized DC power supply device as claimed in claim 1,
wherein the current detection circuit comprises a current-sensing resistor through which the output current of the output transistor flows and an operational

amplifier that detects a voltage across the current-sensing resistor; and

at least the control circuit is incorporated into a semiconductor integrated circuit and the current-sensing resistor is connected externally with respect to the semiconductor integrated circuit.

4. A stabilized DC power supply device as claimed in claim 1,

wherein the protection circuit has a resistor and a restricted value of the wattage power of the output transistor is set by a resistance value of the resistor; and

at least the control circuit is incorporated into a semiconductor integrated circuit and the resistor is connected externally with respect to the semiconductor integrated circuit.

5. A stabilized DC power supply device as claimed in claim 1,

wherein the current detection circuit comprises a current-sensing resistor through which the output current of the output transistor flows and an operational amplifier that detects a voltage across the current-sensing resistor;

the protection circuit has a resistor and a restricted value of the wattage power of the output transistor is set by a resistance value of the resistor; and

at least the control circuit is incorporated into a semiconductor integrated circuit, and the output transistor, the current-sensing resistor, and the resistor are connected externally with respect to the semiconductor integrated circuit.